



Community Engagement

HKU Faculty of Dentistry shows how dentistry can be used to teach secondary school science

25 June & 2 July 2011



The HKU Faculty of Dentistry hosted two workshops this summer for about 40 secondary school science teachers to demonstrate how dentistry can be integrated into learner-centred science classes.

Although the secondary school curriculum already covers some oral health topics, little emphasis is placed on the scientific basis of common dental diseases; moreover, science classes are traditionally taught in a teacher-fronted, unidirectional way. These teaching gaps spurred a team at the HKU Faculty of Dentistry—known for its undergraduate dental curriculum that integrates problem-based learning (PBL)—to develop an all-day teachers' workshop titled *Using Dental Examples for Teaching Science*.

The Faculty team (Prof Edward Lo, Prof Li-jian Jin, Prof Lakshman Samaranayake, Dr Jayampath Seneviratne, Dr Xiao-li Gao, and Dr Susan Bridges) used their expertise in PBL to illustrate how real-life dental problems could form the basis of interesting, interactive science lessons. After a brief seminar about layers of microbes (biofilms) in dental plaque, the school teachers took part in hands-on laboratory sessions that introduced the concepts of tooth decay and acid erosion through the guided discovery of microbes in participants' own dental plaque and the acidity of popular drinks.

An expert panel then discussed the scientific basis of the laboratory observations, relating them to the disease processes of dental decay and gum disease. At the end of the workshop, the teachers received teaching materials, such as posters and laboratory kits, so that they could transfer their knowledge to their own classes. Questionnaire feedback showed that participants regarded the project as "very innovative and interesting".

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Knowledge exchange (KE) at the HKU Faculty of Dentistry (<http://facdent.hku.hk>) aims to maintain a two-way dialogue between the Faculty and all sectors of the community. The Faculty's KE strategy, public education, and community activities form part of the Faculty's fourth mission of "engagement". We will be pleased to consider any suggestions or comments, or community/school invitations; please e-mail dentktu@hku.hk

